STATE OF NEW HAMPSHIRE
Department of Environmental Services
Air Resources Division

General State Permit

GSP-EG-_____

Source Category: Internal Combustion Engines Used As Emergency Generators

This general state permit is established in accordance with New Hampshire Code of Administrative Rules, Env-A 204, *Procedures for Establishing and reestablishment General State Permits*, Env-A 610, *General State Permits and General Permits Under Title V,* and RSA 125-C of the New Hampshire Laws. The established milestones are as follows:

Date of Proposed General State Permit	June 23, 2003
Date Proposed General State Permit was Sent to EPA	June 23, 2003
Public Notice Date	June 25, 2003
Close of Public Comment Period	July 28, 2003
Public Hearing Date	None requested
Expiration Date of General State Permit	August 31, 2008

Acronyms and Abbreviations

Division	NH Department of Environmental Services, Air Resources Division	USEPA	United States Environmental Protection Agency
GSP	General State Permit	RACT	Reasonably Available Control Technology
ICE	Internal Combustion Engine	TSP	Total Suspended Particulate
EG	Emergency Generator	NOx	Oxides of Nitrogen
MMBtu	Million British thermal units	CO	Carbon Monoxide
hr	hour	SO_2	Sulfur Dioxide
tpy	tons per consecutive 12-month period	VOC	Volatile Organic Compounds
lb	pound	PM_{10}	Particulate Matter < 10 microns

This General State Permit (GSP) is issued for the specific emergency generator(s) (EG(s)) described in the registration package submitted to the New Hampshire Department of Environmental Services, Air Resources Division (Division) in accordance with Env-A 610.07, *Procedures for Registering to Operate Under a General State Permit*. Any replacement EG or additional EG would require a new or updated registration package be submitted to the Division for review. This GSP is valid provided the EG(s) are operated in accordance with the conditions within this permit.

_____ August 19, 2003

Chief Air Programs Manager
Air Resources Division

Date of Final Action

I. The Owner or Operator of the devices covered by this permit shall be subject to all applicable state and federal air pollution control regulations, including (but not limited to) Env-A 100 et seq., *New Hampshire Rules Governing the Control of Air Pollution*.

II. All equipment, facilities and systems installed and used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible to minimize air pollutant emissions.

III. Source Category Description and Definitions:

A. The source category *Internal Combustion Engines Used As Emergency Generators* is applicable to one or more internal combustion engines (ICEs) operating at a source as an EG as defined in Condition III.B. which either:

1. Combusts liquid fuel oil for which the combined total design gross heat input for all such engines is greater than or equal to 1.5 million British thermal units per hour (MMBtu/hr);
2. Combusts natural gas or liquefied propane gas for which the combined total design gross heat input of all such engines is greater than or equal to10.0 MMBtu/hr; or
3. Has the potential to emit any single regulated air pollutant in an amount greater than 25 tons per consecutive 12-month period (tpy).

B. Env-A 1211.02(o), *emergency generator* means a stationary ICE which operates as a mechanical or electrical power source only when the primary power source for a facility has been lost during an emergency, such as power outage and/or during the normal maintenance and testing procedure as recommended by the manufacturer. EG shall not include a load-shaving unit, peaking power production unit, or a standby engine in an energy assistance program.

IV. Operating Limitations:

A. The maximum hours of operation of each EG covered by this GSP shall be limited to 500 hours during any consecutive 12-month period.

B. The maximum gross heat input rate of each EG covered by this GSP shall be limited to the maximum gross heat input rate of each device (MMBtu/hr) for the EG listed in the registration package.

C. Total fuel consumption during any consecutive 12-month period for each EG covered by this GSP shall not exceed a quantity of fuel that would result in an exceedance of any condition specified in this GSP.

D. Env-A 1600, *Fuel Specifications*: Each EG covered by this GSP shall be limited to the following fuels and the sulfur content of the fuels shall not exceed the limitations in Table 1:

Table 1
Fuel Specifications

Fuel	Sulfur Limitation
#2 oil, off-road diesel oil, and JP-4 aviation fuel	0.40% sulfur by weight
on-road low sulfur diesel oil and aviation gasoline	0.05% sulfur by weight
kerosene-1 oil	0.04% sulfur by weight
gasoline	0.10% sulfur by weight
natural gas, liquefied natural gas (LNG), liquefied petroleum gas (LP gas), propane, or manufactured gas and blended gas	15 grains of sulfur per 100 cubic feet of gas, calculated as hydrogen sulfide at standard temperature and pressure

V. Emission Limitations[1]:

A. Env-A 2003, *Operational Requirements*:

1. Env-A 2003.01, *Visible Emission Standard For Fuel Burning Devices Installed on or Prior to May 13, 1970*: No Owner or Operator shall cause or allow average opacity from the EG in excess of 40% for any continuous 6-minute period, or

2. Env-A 2003.02, *Visible Emission Standard For Fuel Burning Devices installed after May 13, 1970*: No Owner or Operator shall cause or allow average opacity from the EG in excess of 20% for any continuous 6-minute period.

3. Env-A 2003.04, *Activities Exempt from Visible Emission Standards*: The average opacity shall be allowed to be in excess of the limits established in Conditions V.A.1 and 2 for one period of 6 continuous minutes in any 60-minute period during startup, shutdown, and malfunction.

B. Each EG covered by this GSP shall be subject to the following particulate matter emission standards for fuel burning devices in Table 2:

Table 2
Maximum Allowable Particulate Matter Emission Rate per EG (E)

Installed	Max. Gross Heat Input Rate (I) MMBtu/hr	E lb/MMBtu
On or Prior to 5/13/70 (Env-A 2003.06)	< 10	0.60
	≥ 10 but < 10,000	$0.880\ I^{-0.166}$
	≥ 10,000	0.19
After 5/13/70 but Prior to 1/1/85 (Env-A 2003.07)	< 10	0.60
	≥ 10 but < 250	$1.028\ I^{-0.234}$
	≥ 250	0.10
On or After 1/1/85 (Env-A 2003.08)	<100	0.30
	≥ 100 but < 250	0.15
	≥ 250	0.10

C. When one fuel burning EG is connected to 2 or more stacks, the allowable particulate emission shall not exceed that allowable for the same EG had it been connected to only one stack.

D. The Facility shall be limited to the following emissions limitations in Table 3:

Table 3
Facility-wide Emissions[2]

Pollutant	Maximum tpy
NOx - Facilities located in Hillsborough, Merrimack, Rockingham and Strafford Counties	< 50
NOx - Facilities located in Belknap, Carroll, Cheshire, Coos, Grafton and Sullivan Counties	< 100
SO_2, PM_{10}, CO	< 100
VOC	< 50

1 Compliance with Condition V.A of this GSP is to be determined using the Code of Federal Regulations 40 CFR 60, Appendix A, Method 9. Compliance with Condition V.D is to be verified using fuel usage records and the appropriate United States Environmental Protection Agency (USEPA) AP-42 emission factor or stack test data.

2 Facility-wide emission limits are set for the purpose of establishing this source as a minor source of air pollution. Such limits shall not be construed to allow this source to construct or install a new or modified source, area source or device except in the manner set forth in the New Hampshire Rules Governing the Control of Air Pollution and, specifically, Env-A 603.

VI. NOx Reasonably Available Control Technology (RACT) Requirements:

Env-A 1211.07, *Emission Standards for Stationary Internal Combustion Engines*: The ICEs shall be exempt from the NOx RACT Requirements of Env-A 1211.07 provided that the actual facility-wide NOx emissions are less than 50 tpy as specified in Env-A 1211.02(n)(1), *Applicability*.

VII. Stack Testing and Air Pollution Dispersion Modeling Impact Analysis Requirements:

A. When conditions warrant, the Division may require the Owner or Operator to conduct stack testing in accordance with USEPA or other Division approved methods.

B. Env-A 606.02(b)(1), *Applicability*: Any Owner or Operator of an EG where the hours of operation are limited to 500 hours per year or less by an enforceable permit condition shall be exempt from the requirements to perform an air pollution dispersion modeling impact analysis for the EG only. If there are other types of devices located at the facility, an air pollution dispersion modeling impact analysis may be required.

VIII. Recordkeeping Requirements:

A. Env-A 902, *Availability of Records*: The Owner or Operator shall keep the records required by this GSP on file for a minimum of 5 years. These records shall be available for review by the Division upon request.

B. Subject to Env-A 103, *Claims of Confidentiality*: All data submitted to the Division, including emission data and applicable emission limitations shall be available to the public.

C. Env-A 903.03, *General Recordkeeping Requirements for Combustion Devices*: The Owner or Operator shall maintain the following records, on a monthly basis, of fuel characteristics and utilization for the fuel used in each EG:

1. Hours of operation;
2. Total monthly amount of fuel consumed, by type;
3. Type of fuel burned (e.g. diesel, No. 2, oil or natural gas); and
4. Sulfur content of any:
    a. Liquid fuel burned as percent sulfur by weight of fuel, and
    b. Gaseous fuel burned as grains sulfur per standard cubic foot of fuel, or percent sulfur by weight, calculated as hydrogen sulfide at standard temperature and pressure.

D. Env-A 905.02, *General NOx Recordkeeping*: If the actual NOx emissions from the Facility are greater than or equal to 10 tpy, the Owner or Operator shall record the following information:

1. Identification of each combustion device;
2. Operating schedule during the *high ozone season* (June 1 to August 31) for each combustion device in Condition VIII.D.1 above, including
    a. Hours and days of operation per calendar month;
    b. Number of weeks of operation
    c. Type and amount of fuel burned;
    d. Heat input rate in MMBtu/hr
    e. The actual NOx emissions for the calendar year and a typical high ozone day during the calendar year; and
    f. The emission factors and the origin of the emission factors used to calculate the NOx emissions.

VIII. Recordkeeping Requirements (continued):

E. Env- 906, *Additional Recordkeeping Requirements*: The Owner or Operator shall maintain a 12-month running total record of facility-wide emissions of pollutants identified in Table 2, which shall include emissions from non-permitted devices for the purpose of demonstrating compliance with the annual facility-wide emission limitations set forth in Condition V to establish the Facility as a Synthetic Minor source of Criteria Pollutants.

IX. Reporting Requirements:

A. Env-A 907.01, *General Reporting Requirements*:

1. The Owner or Operator shall submit an annual emissions report to the Division on or before April 15th of the following year. For example, the annual emissions report for calendar year 2003 shall be submitted on or before April 15, 2004.
2. The annual emissions report shall include the following information:
   a. Actual calendar year emissions from each EG, on a monthly basis, of NOx, CO, PM_{10}, SO_2, TSP, and VOC.
   b. The methods used in calculating such emissions in accordance with Env-A 704.02, *Determination of Actual Emissions for Use in Calculating Emission-based Fees*; and
   c. All information recorded in accordance with Condition VIII.C.

B. Env-A 909, *NOx Emission Statements Reporting Requirements*: If the actual annual NOx emission for the Facility are greater than or equal to than 10 tpy, the Owner or Operator shall include all data recorded pursuant to Condition VIII.D in the annual emissions report required in Condition IX.A.

X. Permit Deviation Recordkeeping and Reporting Requirements:

A. Env-A 101, *Definitions*:

1. A *permit deviation* is any occurrence that results in an excursion from any emission limitation, operating condition, or work practice standard as specified in either a Title V permit, state permit to operate or temporary permit issued by the Division.
2. An *excess emission* is an air emission rate that exceeds any applicable emission limitation.

B. Env-A, 911.02, *Recordkeeping Requirements*: In the event of a permit deviation, the Owner or Operator shall:

1. Investigate and take corrective action immediately upon discovery of the permit deviation to restore the affected EG to within allowable permit levels; and
2. Record the following information:
   a. The permit deviation and the probable cause of the permit deviation;
   b. The date and the duration of the occurrence;
   c. The specific EG that contributed to the permit deviation; and
   d. Any corrective or preventative measures taken.

X. Permit Deviation Recordkeeping and Reporting Requirements (continued):

C. Env-A 911.03(a), *Reporting Requirements*: If the permit deviation referenced in Condition X.B does not cause excess emissions, but continues for a period greater than 9 consecutive days, the Owner or Operator shall:

1. Notify the Division by telephone (603 271-1730), fax (603 271-7053) or email (pdeviations@des.state.nh.us) on the 10th day of the permit deviation, unless it is a Saturday, Sunday, or state or federal legal holiday, in which event; the Division shall be notified on the next day which is not a Saturday, Sunday, or state or federal legal holiday; and
2. Such notification shall include all of the information recorded in accordance with Condition X.D.2.a through X.D.2.h.

D. Env-A 911.03(b): If the permit deviation referenced in Condition X.B does cause excess emissions, the Owner or Operator shall:

1. Notify the Division of the permit deviation and excess emissions by telephone, fax or email within 24 hours of discovery of the permit deviation, unless it is a Saturday, Sunday, or state or federal legal holiday, in which event, the Division shall be notified on the next day which is not a Saturday, Sunday, or state or federal legal holiday; and
2. Submit a written report to the Division within 10 days of discovery of the permit deviation reported in Condition X.D.1, which shall include the following information:
   a. Facility name and address;
   b. Name and telephone number of the responsible official at the Facility;
   c. Date(s) and time(s) of the occurrence;
   d. Description of the permit deviation and its probable cause;
   e. Corrective action take to date;
   f. Preventative measures taken to prevent future occurrences;
   g. Date and time that the EG returned to operation in compliance with an enforceable emission limitation or operating condition;
   h. The specific EG that contributed to the permit deviation;
   i. The type and quantity of excess emissions emitted to the atmosphere due to the permit deviation; and
   j. The calculation or estimation used to quantify the excess emission.
3. If the notification within 24 hours of discovery of the deviation was made to the Division by email or fax and it contained all the information specified in items a through j, then the Owner or Operator is exempt from the requirements of Conditions X.D.2 to send a written report of the deviation within 10 days of discovery.

E. The Owner or Operator shall report to the Division, by April 15th, the following information:

1. A summary of all permit deviations previously reported to the Division during the previous year pursuant to Conditions X.C and X.D; and
2. A list of all permit deviations recorded during the previous year pursuant to Condition X.B.2.

XI. Emission-Based Fee Requirements:

A. Env-A 704.03, *Calculation of Emission-based Fees*: The Owner or Operator shall pay an emission-based fee annually as calculated each calendar year for the EGs covered by this permit.

B. Env-A 616, *Determination of Actual Emissions*: The Owner or Operator shall determine the total actual annual emissions from this Facility for each calendar year in accordance with the methods specified in Env-A 616. If the Facility-wide emissions are less than one ton for the calendar year, payment of the fee is optional.

C. The Owner or Operator shall calculate the annual emission-based fee for each calendar year in accordance with the procedures specified in Env-A 704.03 and the following equation:

$$FEE = E * DPT * CPIm * ISF$$

where:

FEE =	The annual emission-based fee for each calendar year as specified in Env-A 704.
E =	The emission-based multiplier is based on total annual emissions as specified in Env-A 704.02 and the provisions specified in Env-A 704.03(a).
DPT =	The dollar per ton fee the Division has specified in Env-A 704.03(b).
CPIm=	The Consumer Price Index Multiplier as calculated in Env-A 704.03(c).
ISF =	The Inventory Stabilization Factor as specified in Env-A 704.03(d).

D. The Owner or Operator shall contact the Division each year for the values of the ISF and CPIm.

E. Env-A 704.04, *Payment of Emission-Based Fee*: The Owner or Operator shall submit to the Division payment of the emission-based fee for each calendar year by October 15th of the following calendar year. The emission-based fee shall be submitted to the following address:

New Hampshire Department of Environmental Services
Air Resources Division
6 Hazen Drive
P.O. Box 95
Concord, NH 03302-0095
ATTN: Emissions Inventory